PATTON Electronics Co.

Model 3101RC
ADSL2/2+ Triple-Play Access IPDSLAM Module

Quick Start Guide

CE

Important—This is a Class A device and is intended for use in a light industrial environment. It is not intended nor approved for use in an industrial or residential environment.

Part Number: 07M3101RC-QS, Rev. A
Revised: October 22, 2008

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WARNING

- **The Model 3101RC shall be installed in a restricted access location accessible only to authorized personnel.**
- **This unit contains no user-serviceable parts. Refer servicing to qualified personnel.**
- **When removing cards from a shelf under power, some of the components such as the DC converters may be extremely hot. Handle by the card guides only.**
- **To prevent accidental electrical short circuits, align the card correctly between the card guides before you insert it in the slot.**

1.0 Pre-Installation

This section provides safety information to review before installing the Model 3101RC. The information includes required installation tools, safety requirements, and electrostatic discharge protection.

1.1 Tools and Test Equipment Requirements

To install and maintain the Model 3101RC, you should have the tools and test equipment listed in **table 1**.

Table 1. Required Installation Tools and Materials

Item Required	Purpose
Anti-static wrist strap	Protect the Model 3101RC system from electrostatic discharge damage.
Hand tools	Screw drivers for equipment removal and replacement.
Wire cutter/stripper	Prepare wires for electrical connections.
Accessories and hardware kit	Screws, bolts, etc., for securing the equipment on the desired location

1.2 Safety Requirement

To prevent possible serious injury, do not apply power to the Model 3101RC system at the central office or any remote site until you've completed all of the installation procedures and connected it to the external facilities. Be cautious when turning on/off the Model 3101RC system power.

1.3 Electrostatic Discharge Protection

The terminal cards contain static-sensitive components. When handling them, be sure to wear a properly grounded anti-static wrist strap to prevent the damage from electrostatic discharge. If a wrist strap is not available, hold all cards only by their edges or extractor handles. Do not touch any component or traces on the cards. For future use, store cards in original shipped antistatic bags, or in an approved static-protected bag or container.

To minimize the possible damage from electrostatic discharge, do not install the Model 3101RC in cold, dry places where static electricity can build up. Also, when handling cards, do not touch their rear-edge connector traces. These electrical contact points should be kept free of body oils and other contaminants.

2.0 Hardware Installation

The hardware installation for the Model 3101RC is simple and without complex hardware setting. However, it should be installed following the standard installation procedures. During installation, basic safety precautions should always be taken, especially, be sure to wear an antistatic wrist strap to prevent static electricity from damaging the system and injury to the operator. Handle electronic components as little as possible.

2.1 Connecting the ADSLx interfaces

The Model 3101RC supports 24/48 ADSL/2/2+ ports. There are two RJ-21 50-pin female connectors on the front panel of the 3101RC TM card. One connector is for DSL ports 1~24; the other is for DSL ports 25~48. When installing, just plug the end of a cable with the RJ-21 50-pin male connector into the DSL interface female connector on the TM card. The other side of the cable is generally tied to the MDF.

The pin assignment of ADSLx interface is illustrated below:

1	2	3	4	5	6	7	8	-	18	19	20	21	22	23	24	25
Tip 1	Tip 2	Tip 3	Tip 4	Tip 5	Tip 6	Tip 7	Tip 8	- -	Tip 18	Tip 19	Tip 20	Tip 21	Tip 22	Tip 23	Tip 24	X 25
26	27	28	29	30	31	32	33	-	43	44	45	46	47	48	49	50
Ring 1	Ring 2	Ring 3	Ring 4	Ring 5	Ring 6	Ring 7	Ring 8	- -	Ring 18	Ring 19	Ring 20	Ring 21	Ring 22	Ring 23	Ring 24	X 25

Figure 1. Pin Assignment of DSL Interfaces

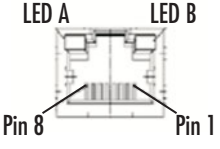
Note Tip 1 is for Port 1 in regard to the connector for 1~24 ports, or Port 25 in regard to the connector for 25~48 ports.

2.2 Connecting the GBE trunk interface

The Model 3101 has two configurable 10/100/1000 auto-negotiation copper GBE trunk interfaces. User can switch any of the two GBE interfaces to PICMG 2.16 backplane or to 3101 TM card independently. By default, the two GBE interfaces connect to 3101 TM card.

RJ-45 Electrical Trunk Port

The pin assignment of RJ-45 connector on the trunk port is shown in the following figure and table.

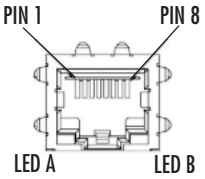


1, 2	T/Rx+, T/Rx -
3, 6	T/Rx+, T/Rx -
4, 5	T/Rx+, T/Rx -
7, 8	T/Rx+, T/Rx -

Figure 2. Trunk Port RJ-45 pin assignment

2.3 Ethernet Port (10/100 ENET) on Trunk Card

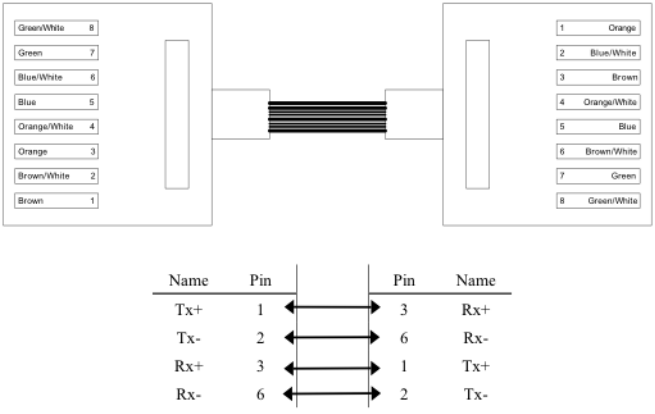
The Model 3101RC provides one RJ45 Jack (10/100 ENET) on the front panel of 3101RC card for Ethernet interface connection. The detailed pin assignment is shown in **figure 3**:



1	2	3	6	Other pins
TX +	TX -	RX +	RX -	

Figure 3. Ethernet Port RJ-45 pin assignment

To connect the Ethernet interface to PC, the Ethernet crossover cable is required. The detailed pin assignment is shown below:

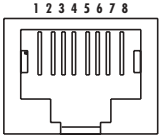


Name	Pin		Pin	Name
Tx+	1	◄►	3	Rx+
Tx-	2	◄►	6	Rx-
Rx+	3	◄►	1	Tx+
Rx-	6	◄►	2	Tx-

Figure 4. Ethernet crossover cable

2.4 Console Port (CONFIG)

The Console interface (CONFIG) on the front panel of 3101RC card is the main control interface of the Model 3101RC. The RJ45 connector pin assignment follows the EIA-561 signal type used in RS-232 interface, and the Model 3101 is a DCE Device. The following figure illustrated the DTE relative pin assignments in RJ45 connector:



4	5	6	Other pins
GND	TxD	RxD	Not used

Figure 5. Console Port RJ-45 pin assignment

To connect the host PC to the console port, a RJ45 (male) connector-to-RS232 DB9 (female) connector cable is required. The RJ45 connector of the cable is connected to the COM port of the DSLAM; the DB9 connector of the cable is connected to the PC COM port. The DTE relative pin assignment of the console cable is shown below:

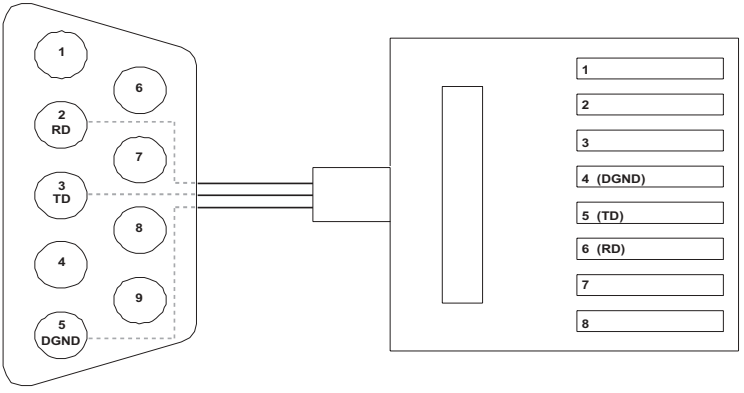


Figure 6. Pin assignment of Console Interface

Table 2. Pin Assignment of Console Cable (DTE Relative)

Signal Type	Abbr.	DB-9F	RJ-45M Pin
Common Ground	GND	Pin 5	Pin 4
Transmitted Data	TxD	Pin 3	Pin 6
Received Data	RxD	Pin 2	Pin 5
Data Terminal Ready	DTR	Not used	Not used
Data Set Ready	DSR	Not used	Not used
Request To Send	RTS	Not used	Not used
Clear To Send	CTS	Not used	Not used
Carrier Detect	DCD	Not used	Not used
Ring Indicator	RI	Not used	NA

3.0 Additional Information

Refer to the *Model 3101RC Getting Started Guide* located on the CD-ROM shipped with your device and available online at **www.patton.com/manuals.** For detailed information about:

- Installing, configuring, operating, and troubleshooting.
- Warranty, trademark & compliance

A.0 Customer and Technical Support

Toll-Free VoIP support: call **sip:support@patton.com** with a VoIP SIP client

Online support: www.**patton.com**

E-mail support: **support@patton.com** — answered within 1 business day

Telephone support:

- Standard: +1 (301) 975-1007 (USA), Monday–Friday: 8:00 am to 5:00 pm EST (1300 to 2200 UTC/GMT)
- Alternate: +41 (0)31 985 25 55 (Switzerland), Monday–Friday: 8:00 am to 5:00 pm CET (0900 to 1800 UTC/GMT)

Fax: **+1 (253) 663-5693** (USA) **or +41 (0)31 985 25 26** (Switzerland)

B.0 Compliance Information

B.1 Compliance

EMC Compliance:

- EN55022, Class A
- EN55024

Safety Compliance:

- EN60950-1

B.2 CE Declaration of Conformity

We certify that the apparatus identified in this document conforms to the requirements of Council Directive 1999/5/EC on the approximation of the laws of the member states relating to Radio and Telecommunication Terminal Equipment and the mutual recognition of their conformity.

The safety advice in the documentation accompanying this product shall be obeyed. The conformity to the above directive is indicated by the CE sign on the device.

Copyright statement

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The information in this document is subject to change without notice. Patton Electronics assumes no liability for errors that may appear in this document.

Warranty

For warranty information, refer to the *Model 3101RC Getting Started Guide* located on the CD-ROM that came with your device or available online at **www.patton.com**.

In accordance with the requirements of council directive 2002/96/EC on Waste of Electrical and Electronic Equipment (WEEE), ensure that at end-of-life you separate this product from other waste and scrap and deliver to the WEEE collection system in your country for recycling.

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